

Abstract of the Disclosure

A system and method for automatically drilling and backreaming a horizontal borehole underground. The system includes a horizontal drilling machine and a machine control system for operating the drilling machine. The machine control system has sensors and control
5 circuits for monitoring and automatically controlling the functions of the drilling machine. The machine control system manages the power consumption of the drilling machine, the fluid dispensed during drilling and backreaming, the lengthening and shortening of the drill string, the tracking and recording of progress along a selected bore path, and the guiding of the downhole tool along the selected bore path. In a drilling operation the method involves identifying a
10 selected bore path and automatically guiding the downhole tool along the selected bore path. In a backreaming operation the method involves connecting a backreamer and a utility line to the drill string and automatically pulling the utility line back through the borehole.

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